



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,102	02/13/2004	Sun Jin Yun	123056-05004443	4540

22429 7590 09/27/2007
LOWE HAUPTMAN HAM & BERNER, LLP
1700 DIAGONAL ROAD
SUITE 300
ALEXANDRIA, VA 22314

EXAMINER

DIAZ, JOSE R

ART UNIT	PAPER NUMBER
----------	--------------

2815

MAIL DATE	DELIVERY MODE
-----------	---------------

09/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Interview Summary	Application No. 10/777,102	Applicant(s) YUN ET AL.	
	Examiner José R. Díaz	Art Unit 2815	

All participants (applicant, applicant's representative, PTO personnel):

- (1) José R. Díaz. (3) _____
(2) Eliot Malamud (Reg. 51989). (4) _____

Date of Interview: 19 September 2007.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
If Yes, brief description: _____.

Claim(s) discussed: 1 and 3.


Identification of prior art discussed: Kurtz et al..

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

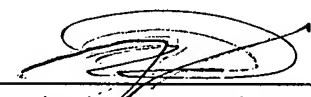
Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussions focused upon a proposed amendment (see attachment) and the outstanding grounds of rejection. Full consideration will be given once a response has been formally filed. Amendments appear to overcome the rejection.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.


SPE Kenneth Parker
TC2800

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

571-273-1727

Approved for use through 08/30/2007, OMB 0851-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Applicant Initiated Interview Request Form

Application No.: 10/777,102 First Named Applicant: Sun Jun Yon
Examiner: J. DIAZ Art Unit: 2815 Status of Application: FINAL

Tentative Participants:

(1) Examiner Diaz (2) ELIOT MAHAMO
(3) _____ (4) _____

Proposed Date of Interview: 9/19/07 Proposed Time: 10:30 (AM/PM)

Type of Interview Requested:

(1) ☒ Telephonic (2) ☐ Personal (3) ☐ Video Conference

Exhibit To Be Shown or Demonstrated: ☐ YES ☒ NO

If yes, provide brief description: _____

Issues To Be Discussed

Issues (Rej., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) <u>Rej</u>	<u>1-13</u>	<u>5,286,671</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Continuation Sheet Attached

Brief Description of Arguments to be Presented:

claiming upper & lower
substrate.

An interview was conducted on the above-identified application on _____.

NOTE: This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP § 713.01).

This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible.

Applicant/Applicant's Representative Signature

ELIOT MAHAMO

Typed/Printed Name of Applicant or Representative

51989

Registration Number, if applicable

Examiner/SPE Signature

This collection of information is required by 37 CFR 1.133. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PROPOSED AMENDMENTS TO THE CLAIMS FOR DISCUSSION ONLY

1. (Currently Amended) A substrate with a microstructure formed thereon, the substrate comprising:

a ~~lower~~temporary substrate supporting an upper substrate ;

a buffer layer formed on an upper surface of the ~~temporary-lower~~ substrate to have a plurality of shapes with air gaps defined between each of said shapes and spaced apart from each other at regular intervals; and

an adhesive layer formed between the upper substrate and the buffer layer so that the upper substrate is removably adhered to the ~~temporary-lower~~ substrate by the adhesive layer and the buffer layer;

wherein, the upper substrate is a plastic, or a metal foil, or a substrate which is thin relative to the temporary substrate, and has a substantially higher flexibility than that of the ~~temporary-lower~~ substrate, and on which a device is formed;

the ~~temporary-lower~~ substrate along with the air gaps is adapted to be removed from the upper substrate after the manufacturing process of the device; and

the air gaps facilitate the removal of the ~~temporary-lower~~ substrate.

2. (Currently Amended) The substrate as claimed in claim 1, wherein the ~~temporary-lower~~ substrate is made of at least one of Si, SiO.sub.2, Al.sub.2O.sub.3, copper, copper alloy, aluminum, aluminum alloy, and glass.

3. (Original) The substrate as claimed in claim 1, wherein the buffer layer is made of at least one of SiO.sub.2, Al.sub.2O.sub.3, AlON, SiON, Si.sub.3N.sub.4, AlN, SOG (spin-on-glass), photosensitive material, Cu, Cu alloy, Al, and Al alloy.

4. (Original) The substrate as claimed in claim 1, wherein the buffer layer is patterned and etched to form a plurality of shapes arranged in many rows or to form a plurality of shapes arranged in hexahedron or cylindrical islands, with air gaps being spaced apart from each other at regular intervals.

5. (Original) The substrate as claimed in claim 1, wherein the adhesive layer is made of any one of a double sided tape, a liquid adhesive, and organic film, to

withstand a hot process of more than 100.degree. C.

6. (Original) The substrate as claimed in claim 1, wherein the upper substrate is made of any one of plastic, stainless steel, copper, copper alloy, aluminum, aluminum alloy, silicon, and glass.

7-12. (Cancelled)

13. (Currently Amended) A substrate with a microstructure formed thereon, the substrate comprising:

a ~~temporary~~lower substrate having an upper surface and a lower surface, said upper surface defining a plurality of projections; and

an adhesive layer adhering a lower surface of an upper substrate to the lower substrate along said projections;

wherein, a plurality of air gaps are defined in between each of said projections, thereby minimizing stress applied to the upper substrate and the lower substrate during a manufacturing process of a semiconductor device or the like.

14. (Currently Amended) The substrate according to claim 13, wherein, said ~~temporary~~lower substrate is a multi layer structure.